FINAL PROPOSED PLAN AND DRAFT MODIFICATION OF COLORADO HAZARDOUS WASTE PERMIT FOR ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE OPERABLE UNIT 11: WEST SPRAY FIELD

United States Department of Energy (DOE) | Jefferson County, Colorado | June 13 1995

DOE Announces Preferred Alternative for OU 11, West Spray Field

The responsibility for the cleanup of the Rocky Flats Environmental Technology Site (Rocky Flats) (formerly known as the Rocky Flats Plant) has been assigned to the United States Department of Energy (DOE) The site is located north of Golden, Colorado, in Jefferson County

Cleanup at Rocky Flats is being administered under both the ***Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)***[1] and the ***Resource Conservation and Recovery Act (RCRA)*** The specific requirements and responsibilities for Rocky Flats cleanup are outlined in the ***Interagency Agreement (IAG)*** between DOE, the United States Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE)

The subject of this document, which is a combination ***Proposed Plan*** and Draft Hazardous Waste Permit Modification, is Rocky Flats ***Operable Unit*** 11 (OU 11), the West Spray Field. OU 11 consists of one ***Individual Hazardous Substance Site (IHSS)***, IHSS 168 This Plan applies only to Operable Unit 11

The purpose of the Proposed Plan is to announce DOE's ***preferred alternative*** for OU 11 The Proposed Plan serves as the basis for the ***Record of Decision (ROD)*** for OU 11 The Draft Permit Modification is used to incorporate remedial action decisions at Rocky Flats into the site's RCRA Permit. CDPHE issues the Final Hazardous Waste Permit Modification once the remedial decision process is completed. Clean closure of IHSS 168 under RCRA can be achieved based on the results of the ***RCRA Facility Investigation/ Remedial Investigation (RFI/RI)*** Closure certification for IHSS 168, signed by an independent registered professional engineer, has been submitted to CDPHE.

The preferred alternative proposed in this plan for OU 11 is No Action. In accordance with IAG and EPA guidance, a No Action decision is appropriate at sites where a previous removal action or natural environmental processes mitigate ***risks*** to human health and the environment. The results of the investigation performed at OU 11 have shown that OU 11 is in a protective state, i e , the OU poses no current or potential threat to human health or the environment.

MARK YOUR CALENDAR. OPPORTUNITIES FOR PUBLIC INVOLVEMENT

Public Comment Period June 28, 1995 - August 28, 1995

Public Hearing July 19 1995
Time 7 00 - 8 00 PM
Location Arvada Center, 6901 Wadsworth Blvd , Arvada

Send Comments to
DOE's External Affairs Office
P O Box 928, Golden, CO 80402-0928

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Colorado Department of Public Health and Environment HMWMD-HWC-B2
4300 Cherry Creek Drive South
Denver, CO 80222-1530
Phone (303) 692-3358

Information Repositories

Rocky Flats Public Reading Room
Front Range Community College
Level B
3645 W 112th Avenue
Westminster, CO 80030

Colorado Department of Public Health and Environment
Hazardous Materials and Waste Management Division
4300 Cherry Creek Drive South
Denver CO 80222-1530

Rocky Flats Citizens Advisory Board
9035 Wadsworth Parkway
Suite 2250
Westminster, CO 80021

Standley Lake Library
8485 Kipling
Arvada, CO 80005

U S Environmental Protection Agency
Superfund Records Center
999 18th Street, 5th floor
Denver, CO 80202-2405

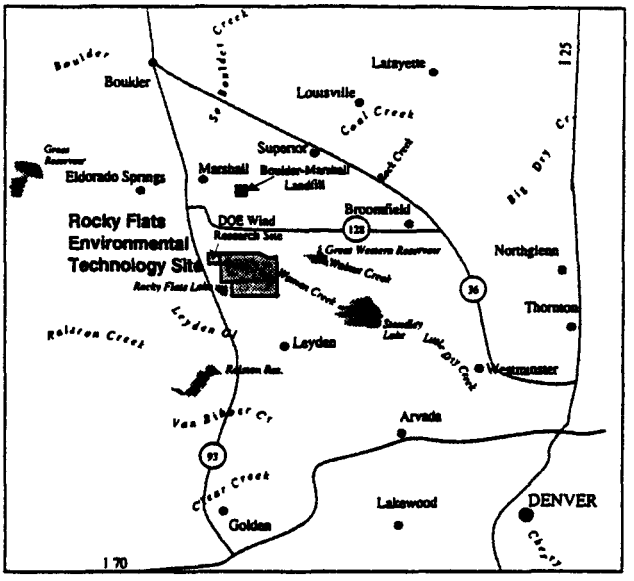
[1] Words shown in italics on the first mention are defined in the glossary at the end of this Proposed Plan

PUBLIC INVOLVEMENT PROCESS

A public comment period will be held for the Proposed Plan and Draft Permit Modification The public is also encouraged to comment on the Final Combined Phases RFI/RI Report, which presents the results of the investigation conducted at OU 11

This public comment period will be from June 28, 1995 to August 28, 1995 A public hearing will be held on July 19, 1995 Comments on the Proposed Plan, Draft Permit Modification and the Final Combined Phases RFI/RI Report may be submitted orally or in writing at the public hearing. Alternatively, written comments, postmarked no later than August 25, 1995, can be sent to the addresses listed on the first page of this document.

Upon timely request, the public comment period may be extended. Such a request must be submitted in writing to DOE, postmarked no later than July 28, 1995 FAILURE TO RAISE AN ISSUE OR PROVIDE INFORMATION DURING THE PUBLIC COMMENT PERIOD MAY PREVENT THE PUBLIC FROM RAISING THAT ISSUE OR SUBMITTING SUCH INFORMATION IN AN APPEAL OF THE AGENCIES' FINAL DECISION



SITE BACKGROUND

Rocky Flats is located in northern Jefferson County, Colorado (see Figure) Rocky Flats occupies approximately 6,550 acres of Federal land and is a government-owned and contractor operated facility that is part of the nationwide nuclear weapons production complex. DOE's former mission at Rocky Flats was to produce components for nuclear weapons from plutonium, uranium and non-radioactive materials Its current mission is to manage wastes and materials and to cleanup and convert the Rocky Flats site to beneficial use in a manner that is safe, environmentally and socially responsible, physically secure and cost-effective

Most plant structures are located within the Rocky Flats Industrial Area, which occupies approximately 400 acres This area is surrounded by a buffer zone of approximately 6,150 acres IHSSs within Rocky Flats were defined and grouped into sixteen operable units (OUs) OU 11, the West Spay Field, is located in the Rocky Flats buffer zone, west of the Industrial Area. OU 11 is the subject of this Proposed Plan

The boundaries of OU 11 coincide with the boundaries of IHSS 168 An IHSS is identified from site history as an area where past operational practices may have resulted in environmental impacts. At OU 11 past operational practices were the periodic spray application of excess liquids pumped from the Solar Evaporation Ponds as a means of evaporating wastewater This spraying was conducted between April 1982 and October 1985 The sources of wastewater stored in the Solar Evaporation Ponds and sprayed at OU 11 include effluents from the Sewage Treatment Plant and ground water collected in the Interceptor Trench System. The pond liquids contained elevated levels of nitrates, metals, radionuclides, volatile organic compounds, and semivolatile organic compounds

SUMMARY OF SITE RISKS

The risks to human health and the environment associated with OU 11 were characterized through the Combined Phases RFI/RI, which was completed in accordance with the requirements presented in the IAG and specifically identified in the Final Phase I RFI/RI Work Plan for OU 11 The RFI/RI focused on two primary objectives first, characterizing the nature and extent of contamination associated with OU 11, and second, evaluating the potential for contaminant migration outside of OU 11 The investigation involved reviewing historical information, conducting visual inspections and completing sampling and analyses of surface soils, subsurface geologic materials and ground water

The Combined Phases RFI/RI report summarizes the results of the investigation including an evaluation of risks at the site Risks at the site have been quantified using the CDPHE Conservative Screen process (see information box for further details) At OU 11 four Potential Contaminants of Concern (PCOCs) were identified in soils and no PCOCs were identified in other media. The four PCOCs in soil were nitrate/nitrite tritium, plutonium-239/240 and americium-241 The concentrations of these PCOCs at OU 11 are very low resulting in a CDPHE Conservative Screen ratio sum of less than one and a corresponding risk of less than one in one million. The ratio sum of less than one resulted in identification of OU 11 as a low-hazard site, requiring No Action under a residential use scenario The screening-level ecological risk assessment did not identify any significant ecological effects An ***Applicable or Relevant and Appropriate Requirements (ARARs)*** evaluation was not performed because an ARARs evaluation is not required when the results of a risk assessment conclude that a site poses no current or potential threat to human health or the environment.

SUMMARY OF REMEDIAL ALTERNATIVE

The preferred alternative proposed in this plan for OU 11, IHSS 168 is No Action based on the results derived from the CDPHE Conservative Screen The CDPHE Conservative Screen provides for the selection of a No Action alternative when the evaluated risk at a site has a ratio sum of less than one OU 11 has been determined to meet this criteria for the No Action alternative

The CDPHE Conservative Screen Process

In 1994, the Colorado Department of Public Health and Environment (CDPHE) developed a conservative screening process for use as a first step in determining the need for a baseline risk assessment. EPA and DOE subsequently agreed with utilization of the process. This CDPHE Conservative Screen process is uniquely used at Rocky Flats. The CDPHE Conservative Screen process provides the basis and justification for the type of subsequent steps taken at a given OU The results of the screen process at each OU determine if a site may be classified as a low-hazard area where no action is required, an area that requires further evaluation via a risk assessment, or an area of high risk that may warrant a potential early action.

The CDPHE Conservative Screen methodology includes the following six steps:

1 Identify inorganic potential contaminants of concern (PCOCs) by statistical comparisons of site chemical data to chemical data from an area that is unimpacted by Rocky Flats activities (background data) All detected organic chemicals are evaluated for consideration as PCOCs.

2 Plot the occurrence of the PCOCs to identify "source areas" at the site. A source area is the physical location of the chemicals that occur at the OU. This knowledge is used to develop the Nature and Extent of Contamination section of the RFI/RI report.

3 For each PCOC, calculate a risk-based concentration (RBC) based on the potential for a resident to be exposed to the PCOC. The basis for the RBC calculation is a one in one million carcinogenic risk and a non-carcinogenic hazard index of one.

4 For each source, identify the maximum concentration of the PCOC in each media (media include soils, air, or water).

5 Calculate a ratio by dividing the maximum concentration of a PCOC by the RBC. The ratios are summed by media.

6 Compare the ratios to the CDPHE Conservative Screen decision criteria: a ratio sum less than one indicates a site requiring No Action (risk is less than one in a million), a ratio sum between one and 100 indicates a risk assessment should be completed (risk is greater than one in one million and requires further quantification), and a ratio sum greater than 100 indicates a voluntary corrective action may be undertaken.

GLOSSARY

Applicable or Relevant and Appropriate Requirements (ARARs) ARARs are criteria standards or limitations promulgated under State of Federal law which may be selected to establish cleanup levels a remedial action is to obtain

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) A law passed in 1980 that establishes a program to identify abandoned hazardous waste sites ensures that they are cleaned up, and evaluates damages to natural resources

Individual Hazardous Substance Site (IHSS) An area that may be contaminated as a result of previous operations and disposal practices

Interagency Agreement (IAG) The January 22, 1991 document prepared by representatives from DOE. EPA and CDPHE It presents the objectives and general protocols for addressing the cleanup or evaluation of each of the operable units at Rocky Flats

Operable Unit (OU). A term defined by CERCLA used to describe a certain portion of a CERCLA site An operable unit may be established based on a particular type of contamination, contaminated media (e g , soils water), source of contamination, and/or geographical location

Preferred Alternative The preliminary recommendation that is judged to provide the best balance of tradeoffs with respect to long- and short-term effectiveness, implementability, cost and the reduction of contaminant toxicity, mobility, or volume through treatment.

Proposed Plan. The public document that first introduces the preferred alternative for site remediation The Proposed Plan is produced through the cooperation of the regulatory agencies and is reviewed by the public

RCRA Facility Investigation/Remedial Investigation (RFI/RI): An investigation that involves collecting and analyzing information to determine the nature and extent of contamination that may be present at a site This may include sampling, risk assessment, and modeling activities

Record of Decision (ROD) A public record that documents and explains the cleanup decisions for a CERCLA site The ROD is based on information from the Remedial Investigation and Feasibility Study, public comments, and community concerns

Resource Conservation and Recovery Act (RCRA): A law passed in 1976 by the U S Congress to require the "cradle-to-grave" management of hazardous wastes CDPHE, through the Hazardous Materials and Waste Management Division, implements RCRA in Colorado

Risk: The likelihood of an adverse effect on the health of a human or ecological population as a result of exposure to chemical and radiological constituents